SEQUENCE LISTING

<110> KARPUSAS, MIHAIL N.
SINGH, JUSWINDER
THOMAS, DAVID W.

<120> CRYSTALS OF FRAGMENTS OF CD40 LIGAND AND THEIR USE

<130> BIOGEN B189 US

<140> 09/180,209
<141> 1998-11-04

<150> 60/000,448
<151> 1995-06-22

<150> PCT/US96/10664
<151> 1996-06-21

<160> 3

<170> PatentIn Ver. 2.1

<210> 1
<211> 152
<212> PRT
<213> Homo sapiens

<400> 1

```
Arg Thr Pro Ser Asp Lys Pro Val Ala His Val Val Ala Asn Pro Gln
  1               5                  10                  15

Ala Glu Gly Gln Leu Gln Trp Leu Asn Arg Arg Ala Asn Ala Leu Leu
             20                  25                  30

Ala Asn Gly Val Glu Leu Arg Asp Asn Gln Leu Val Val Pro Ser Glu
         35                  40                  45

Gly Leu Tyr Leu Ile Tyr Ser Gln Val Leu Phe Lys Gly Gln Gly Cys
     50                  55                  60

Pro Ser Thr His Val Leu Leu Thr His Thr Ile Ser Arg Ile Ala Val
 65                  70                  75                  80

Ser Tyr Gln Thr Lys Val Asn Leu Leu Ser Ala Ile Lys Ser Pro Cys
                 85                  90                  95

Gln Arg Glu Thr Pro Glu Gly Ala Glu Ala Lys Pro Trp Tyr Glu Pro
            100                 105                 110

Ile Tyr Leu Gly Gly Val Phe Gln Leu Glu Lys Gly Asp Arg Leu Ser
        115                 120                 125

Ala Glu Ile Asn Arg Pro Asp Tyr Leu Leu Phe Ala Glu Ser Gly Gln
    130                 135                 140

Val Tyr Phe Gly Ile Ile Ala Leu
145                 150
```

<210> 2
<211> 146
<212> PRT
<213> Homo sapiens

<400> 2

```
Thr Leu Lys Pro Ala Ala His Leu Ile Gly Asp Pro Ser Lys Gln Asn
 1               5                  10                  15

Ser Leu Leu Trp Arg Ala Asn Thr Asp Arg Ala Phe Leu Gln Asp Gly
            20                  25                  30

Phe Ser Leu Ser Asn Asn Ser Leu Leu Val Pro Thr Ser Gly Ile Tyr
        35                  40                  45

Phe Val Tyr Ser Gln Val Val Phe Ser Gly Lys Ala Tyr Ser Pro Lys
    50                  55                  60

Ala Thr Ser Ser Pro Leu Tyr Leu Ala His Glu Val Gln Leu Phe Ser
65                  70                  75                  80

Ser Gln Tyr Pro Phe His Val Pro Leu Leu Ser Ser Gln Lys Met Val
                85                  90                  95

Tyr Pro Gly Leu Gln Glu Pro Trp Leu His Ser Met Tyr His Gly Ala
            100                 105                 110

Ala Phe Gln Leu Thr Gln Gly Asp Gln Leu Ser Thr His Thr Asp Gly
        115                 120                 125

Ile Pro His Leu Val Leu Ser Pro Ser Thr Val Phe Phe Gly Ala Phe
    130                 135                 140

Ala Leu
145
```

<210> 3
<211> 146
<212> PRT
<213> Homo sapiens

<400> 3

```
Gly Asp Gln Asn Pro Gln Ile Ala Ala His Val Ile Ser Glu Ala Ser
 1               5                  10                  15

Ser Lys Thr Thr Ser Val Leu Gln Trp Ala Glu Lys Gly Tyr Tyr Thr
            20                  25                  30

Met Ser Asn Asn Leu Val Thr Leu Glu Asn Gly Lys Gln Leu Thr Val
        35                  40                  45

Lys Arg Gln Gly Leu Tyr Tyr Ile Tyr Ala Gln Val Thr Phe Cys Ser
    50                  55                  60
```

```
Asn Arg Glu Ala Ser Ser Gln Ala Pro Phe Ile Ala Ser Leu Cys Leu
 65                  70                  75                  80

Lys Ser Pro Gly Arg Phe Glu Arg Ile Leu Leu Arg Ala Ala Asn Thr
                 85                  90                  95

His Ser Ser Ala Lys Pro Cys Gly Gln Gln Ser Ile His Leu Gly Gly
            100                 105                 110

Val Phe Glu Leu Gln Pro Gly Ala Ser Val Phe Val Asn Val Thr Asp
        115                 120                 125

Pro Ser Gln Val Ser His Gly Thr Gly Phe Thr Ser Phe Gly Leu Leu
    130                 135                 140

Lys Leu
145
```